

A

Notice of Allowability	Application No.	Applicant(s)	
	09/940,792	FARRAR ET AL.	
	Examiner	Art Unit	
	Eugene Lee	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/27/06.
2. ☒ The allowed claim(s) is/are 46-48, 51-56, 58-60, 62-65, 67-74 and 76-81.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 * Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
 Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 3/27/06, 08/29/01, 11/30/01
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
 Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EUGENE LEE
PRIMARY EXAMINER

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 82-91, previously withdrawn from consideration for being drawn towards a non-elected invention, have been cancelled.

Authorization for this examiner's amendment was given in a telephone interview with Gabriela I. Coman on 1/12/06.

Allowable Subject Matter

2. Claims 46 thru 48, 51 thru 56, 58 thru 60, 62 thru 65, 67 thru 74, and 76 thru 81 are allowed. The following is an examiner's statement of reasons for allowance: The references of record, either singularly or in combination, do not teach or suggest at least an integrated circuit substrate comprising at least one buried conductor pattern provided within a monocrystalline substrate such that said buried conductor pattern is completely surrounded by the same monocrystalline substrate material of a same conductivity type of said monocrystalline substrate, said at least one buried conductor pattern forming at least a part of an interconnect between devices.

Regarding claims 56, and 58-60, the references of record, either singularly or in combination, do not teach or suggest a buried conductor pattern within a monocrystalline substrate, comprising: at least a buried conductor pattern being completely surrounded by the same monocrystalline substrate material of a same conductivity type of said monocrystalline substrate, said buried conductor pattern forming at least a part of an interconnect between devices.

Regarding claims 62-65, and 67-71, the references of record, either singularly or in combination, do not teach or suggest a processor system comprising: a conductive structure comprising a monocrystalline substrate having at least one empty space pattern; a conductive material filling said empty space pattern such that said conductive structure is completely surrounded by the same monocrystalline substrate material of a same conductivity type of said monocrystalline substrate, said conductive structure forming at least a part of an interconnect between devices.

Regarding claims 72-74, the references of record, either singularly or in combination, do not teach or suggest at least an integrated circuit substrate comprising a plurality of buried conductor patterns provided within a monocrystalline substrate such that said buried conductor patterns are completely surrounded by the same monocrystalline substrate material of said monocrystalline substrate, said buried conductor patterns forming at least a part of an interconnect between devices.

Regarding claims 76-81, the references of record, either singularly or in combination, do not teach or suggest at least an integrated circuit substrate comprising first and second buried conductor patterns provided within a monocrystalline substrate such that said buried conductor

Art Unit: 2815

patterns are completely surrounded by the same monocrystalline substrate material of said monocrystalline substrate, said first and second buried conductive patterns forming at least a part of first and second interconnects between devices.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

INFORMATION ON HOW TO CONTACT THE USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.

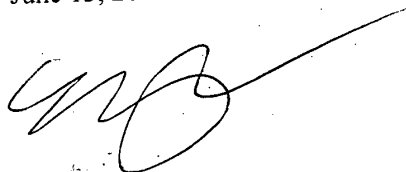
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 09/940,792
Art Unit: 2815

Page 5

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eugene Lee
June 13, 2006



EUGENE LEE
EXAMINER
PRIMARY EXAMINER